Electronic Supplementary Information

Close-packed 3D Plasmonic Superlattice of Truncated Octahedral Gold Nanoframes

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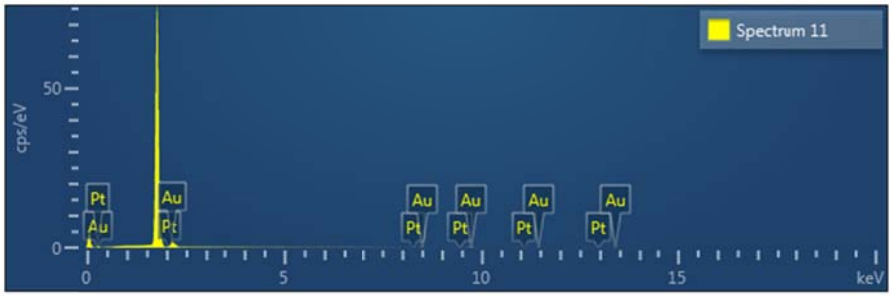

Element	Atomic %
Pt	34.87
Au	65.13
Total	100

Fig. S1. EDS data indicate elemental proportion of synthesized TOh Pt@Au NFs.

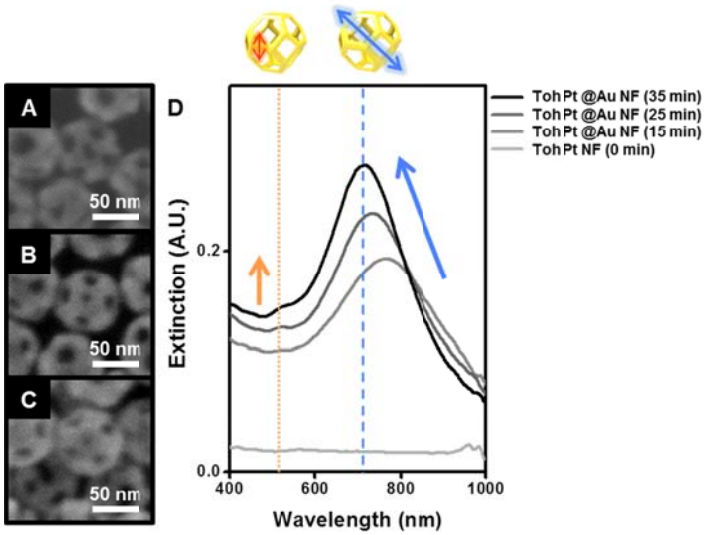

Fig. S2. (A-C) SEM images and (D) UV-vis-NIR spectra of TOh Pt@Au NFs were obtained as the rim thickness of NFs increased from 15 nm to 17 nm, and eventually to 18 nm, corresponding to panel A, B, and C, respectively. The rim peak (orange dotted line) is located in the shorter wavelength and the dipole mode peak (blue dashed line) is in the longer wavelength region.

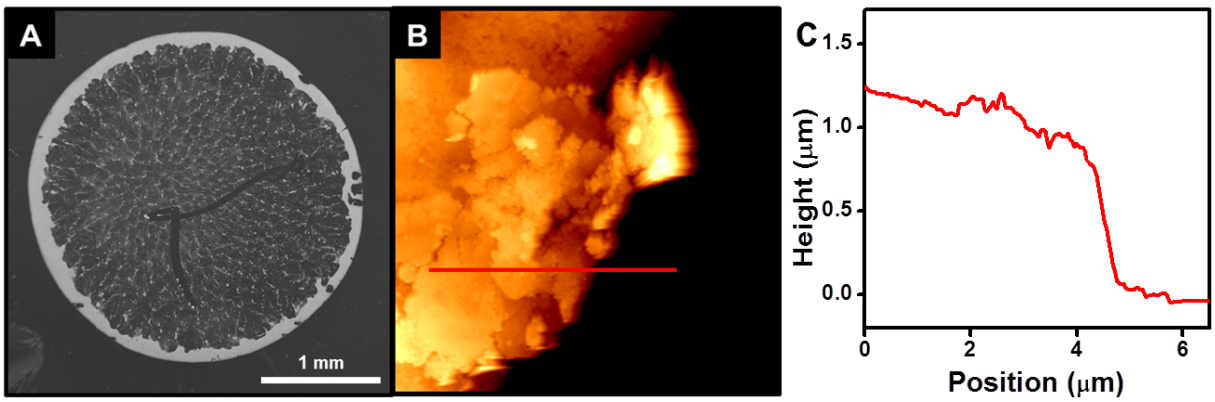

Fig. S3. (A) SEM image shows the diameter and width of superlattice. (B, C) AFM data indicates the height of superlattice. The AFM height profile in panel C was obtained along red line in panel B.

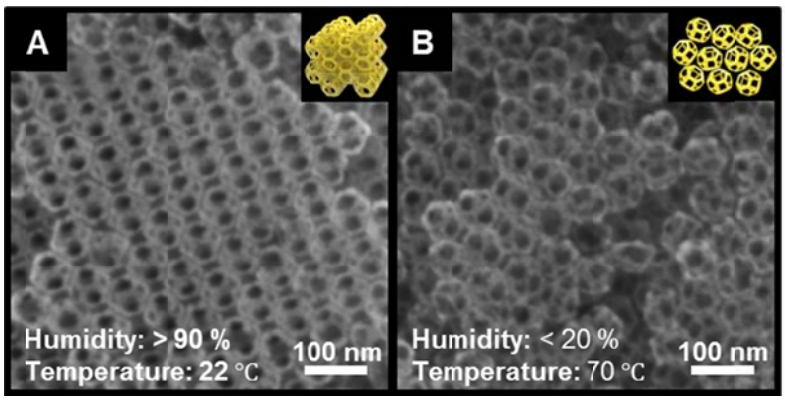

Fig. S4. (A-B) SEM images exhibit the effect of drying speed in the drop evaporation process.

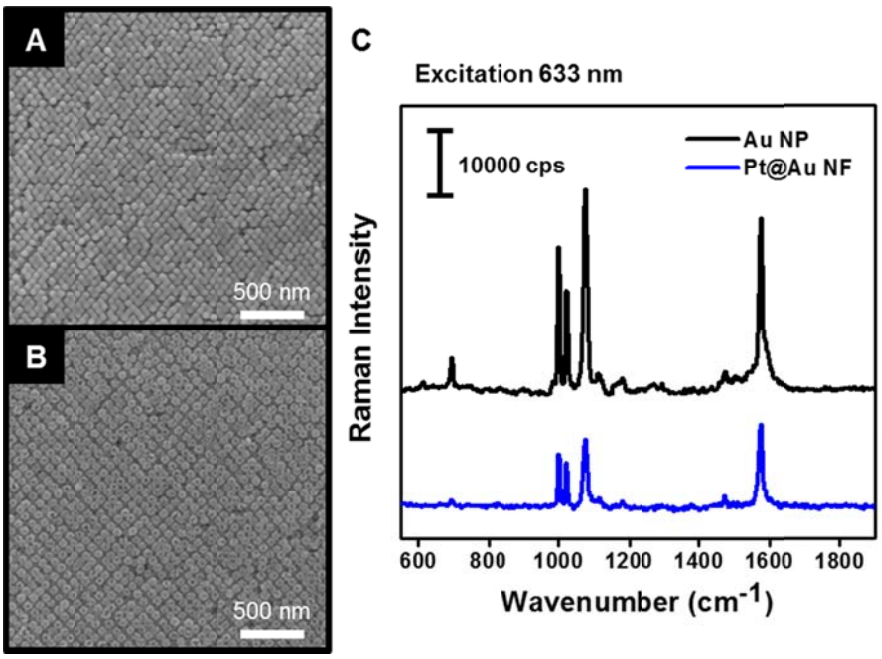

Fig. S5. (A-B) SEM images showing the superlattices consisted of TOh Au NPs (A) and TOh Pt@Au NFs (B). (C) SERS spectra of absorbed benzenethiol on the surface of each superlattice.